Main Functionalities

The NtPLUS (Network Termination) unit plays a major part in the In-home layer of the PLUS network. The NtPLUS is the mediator between the end-customer's home equipment (such as the PC and an analog telephone) and the PLC network. As part of the PLUS network's In-home layer, the NtPLUS includes the following functions:

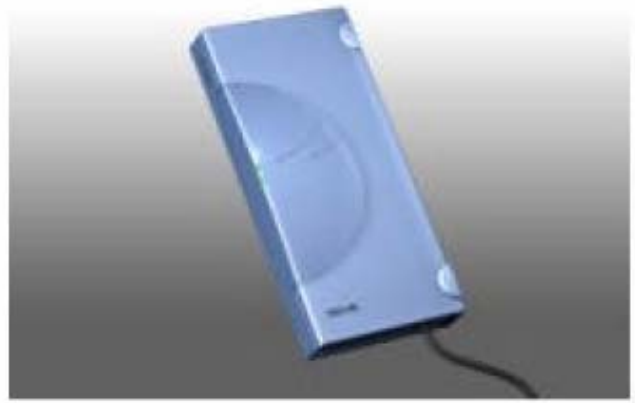
· Transmission of data and voice over IP to the PLC;
· Remote upgrade;
· Utilization of Main.net's Smart Repetition ™ technology (least cost route selection) to find the best communication route.

The NtPLUS unit also integrates with the end-customer's home equipment and so has the following functions:

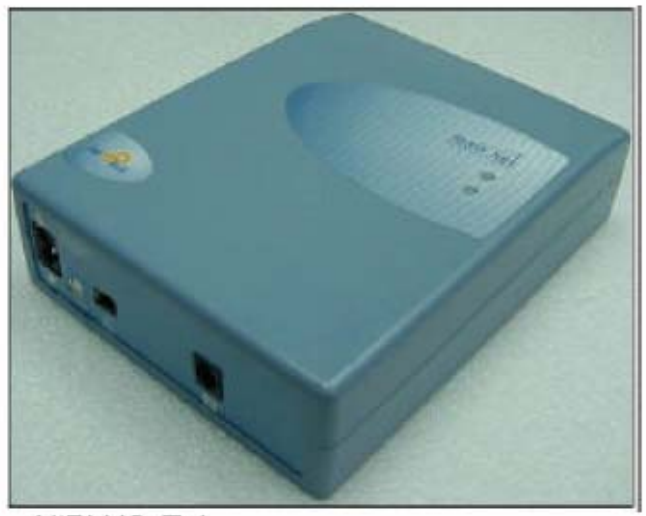
· Providing the end-customer with Internet access and telephony service (the NtPLUS-Tel);
· Providing the end-customer with an option for forming a home network made of several In-home PLUS units.

Benefits

· Available Internet access and telephony service at every electricity outlet
· "Smart Repetition" technology to achieve high quality communication
· Patented technology to achieve a collision-free communication environment
· Fully transparent IP communication support system to enable any standard IP application support
· USB and Ethernet ports to enable seamless connectivity to end-customer's home equipment
· Minimal emission utilizing cutting-edge transmission techniques
· Emission and radiation standard compliancy
· Plug and Play unit
· Convenient unit installation and placement
· Easy in-home networking of several NtPLUS units
· Remote management and self operating system upgrade



NtPLUS

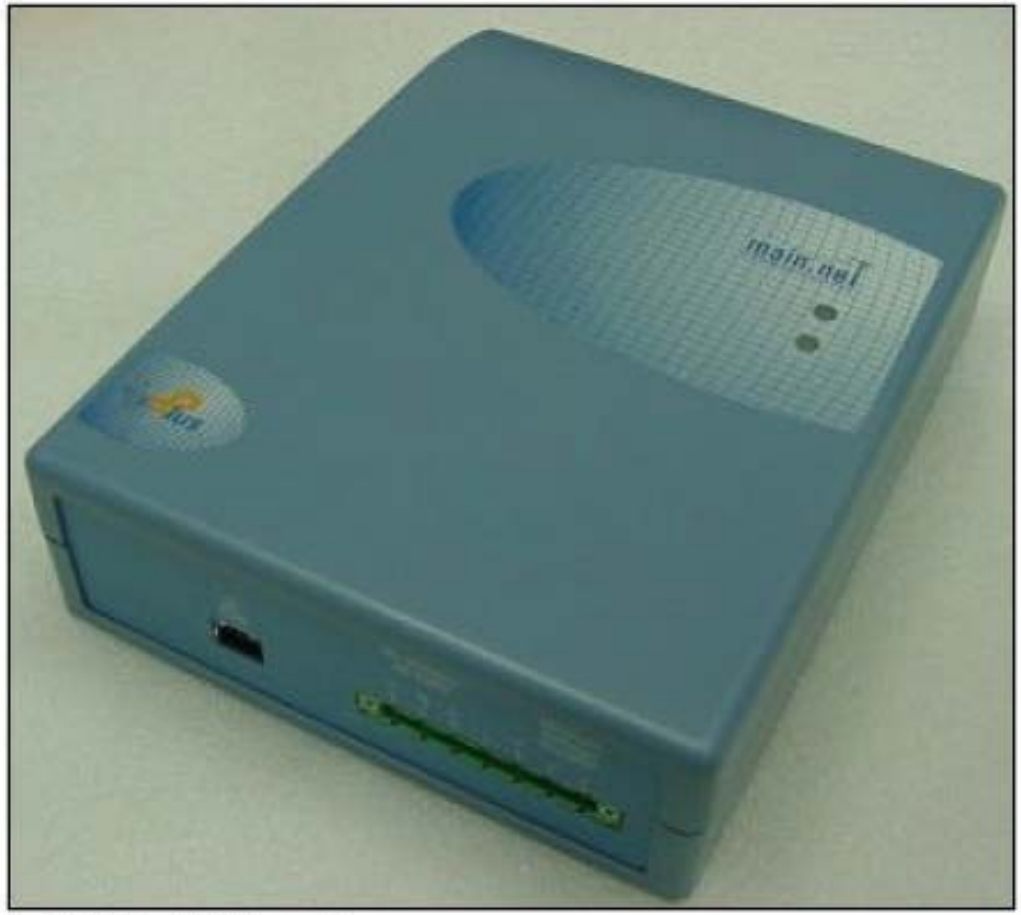


NtPLUS-Tel

The CuPLUS (CU) concentrates all the units under it (i.e. in its cell). The CU usually resides in a transformer to which a T1 or fiber backbone is connected. The communication enters the CU via a 10BaseT connector, and is bridged to the medium voltage electricity grid where it travels to the units in the cell. The connection of the CU to the grid is done using inductive couplers that sit on the wires.

Communication between the CU and the units in its cell is done via a proprietary SNMP-like protocol. All the units within a cell register on the CU when activated, and the CU contains a dynamic table of all units in its cell with information regarding their MAC address, their IP address and the traffic they receive/deliver. This table is constantly updated, as the whole system is dynamic and constantly changing. The information held by the CU is used both for routing/bridging by the CU and for management of the PLUS network by the NmPLUS.

Communication between the CU and the NmPLUS is done via SNMP V2. The MIB of the alarms and events generated by the PLUS units is available for use on external MIB browsers, if needed.



CuPLUS - MCA unit

Main Functionalities

The RpPLUS or the PLUS network Repeater unit has the task of transmitting the communication to achieve a clear communication along vast distances. As part of the Access layer, the RpPLUS
forms the linkage between the In-home units and the CuPLUS. The RpPLUS, therefore, has the task of:

· Repeating the IP communication coming from the In-home layer units;

· Maintaining the ongoing IP communication integrity through careful reconstruction procedures;

· Utilizing the Smart Repetition™ (least cost route selection) technology to achieve the best communication route;

· Utilizing Main.net patented technology to achieve collision-free communication environment;

· Overcoming powerline network noise interference via selective, sophisticated filtering algorithms.

The RpPLUS resides in street cabinets or poles and is remotely managed by the NmPLUS system.

RpPLUS

Rated Voltage 15 KV (phase-to-phase)